

REMARKS

Favorable reconsideration of this application is respectfully requested in view of the claim amendments and following remarks.

By virtue of the amendments above, Claims 1-7, 9-11, 14-18, 20, and 22 have been amended and Claims 13 and 21 have been cancelled without prejudice or disclaimer of the subject matter contained therein. Accordingly, Claims 1-12, 14-20, and 22 remain pending in the present application, of which Claims 1, 14, and 22 are independent.

No new matter has been introduced by way of the claim amendments; entry thereof is therefore respectfully requested.

Allowable Subject Matter

The indication that Claims 4-13, 16-20, and 22 would be allowable if rewritten to overcome the rejections under 35 U.S.C. §101 set forth in the Official Action is noted with appreciation.

The heading of the Allowable Subject Section in the Official Action fails to indicate that Claim 21 also contains allowable subject matter. The body of that section, however, indicates that Claim 21 contains subject matter not disclosed in the art of record. In addition, the Official Action has not asserted that any of the cited documents of record render Claim 21 unpatentable. Accordingly, it is believed that Claim 21 is also allowable over the cited documents of record.

It is respectfully submitted that the rejections based upon 35 U.S.C. §101 have been overcome by way of the claim amendments. In addition, independent Claim 1 has been amended to include all of the features of allowable Claim 13 and independent Claim 14 has

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been amended to include all of the features of allowable Claim 21. As such, all of the pending claims are allowable over the cited documents of record.

Accordingly, the Examiner is respectfully requested to withdraw any remaining rejections and to allow Claims 1-12, 14-20, and 22 of the present invention.

Drawings

The Official Action objects to the drawings on the basis that Figures 1 and 2 must be labeled as "Prior Art". Submitted herewith is a "Replacement Sheet" of Figures 1 and 2, in which, Figures 1 and 2 have been amended to include the "Prior Art" label. Accordingly, the Examiner is respectfully requested to withdraw the objection to the drawings.

Information Disclosure Statements

The indication that the documents cited in the Information Disclosure Statements submitted on February 9, 2004 and April 11, 2005 have been considered is also noted with appreciation.

Claim Rejection Under 35 U.S.C. §101

Claims 1-22 have been rejected under 35 U.S.C. §101 as allegedly being directed to non-statutory subject matter.

More particularly, Claims 1-13 have been rejected on the basis that these claims recite mathematical algorithms instead of structural elements, and are thus directed to non-statutory subject matter. Claims 1-13 have been amended in various respects to replace the term "algorithm" with "module" for the down-sampling module and the up-sampling module.

Support for these amendments may be found for instance, on page 6, line 5 (down-sampling module 110) and line 25 (up-sampling module 140) of the Specification.

In addition, Claims 1-13 have been amended in various other respects to further define the up-sampling module in terms of its various functions. As stated in MPEP 2173.05(g), “[a] functional limitation is an attempt to define something by what it does, rather than by what it is (e.g., as evidenced by its specific structure or specific ingredients). There is nothing inherently wrong with defining some part of an invention in functional terms. Functional language does not, in and of itself, render a claim improper.” Citing to *In re Swinehart*, 439 F.2d, 210, 169 USPQ 226 (CCPA 1971).

It is respectfully submitted, therefore, that Claims 1-13 are in proper form and recite statutory subject matter.

The Official Action asserts that Claims 14-22 are also directed to non-statutory subject matter because they are directed to mathematical algorithms. Although Applicants respectfully disagree with this interpretation of the claims, Applicants have amended Claims 14-22 to include steps which recite outcomes of each of the steps.

At least by virtue of the amendments to Claims 1-22, the Examiner is respectfully requested to withdraw the rejection of these claims as allegedly being directed to non-statutory subject matter.

Claim Rejection Under 35 U.S.C. §103

The test for determining if a claim is rendered obvious by one or more references for purposes of a rejection under 35 U.S.C. § 103 is set forth in MPEP § 706.02(j):

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation,

either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art and not based on applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

Therefore, if the above-identified criteria are not met, then the cited reference(s) fails to render obvious the claimed invention and, thus, the claimed invention is distinguishable over the cited reference(s).

Claims 1-3, 14, and 15 have been rejected under 35 U.S.C. § 103(a) as allegedly being obvious over U.S. Patent No. 6,941,028 to Kimmel et al. in view of allegedly admitted prior art. This rejection is respectfully traversed for at least the following reasons.

As discussed above, independent Claims 1 and 14 have been amended to include all of the features of Claims 13 and 21, respectively, which the Official Action has indicated as being allowable. For at least this reason, it is respectfully submitted that independent Claims 1 and 14 are allowable over Kimmel et al., considered singly or as modified in the Official Action.

Accordingly, the Examiner is respectfully requested to withdraw the rejection of independent Claims 1 and 14 and to allow these claims. Claims 2, 3, and 15 are also allowable over the cited documents of record at least by virtue of their respective dependencies upon allowable independent claims.

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Conclusion

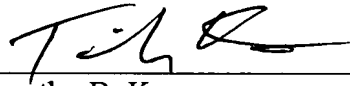
In light of the foregoing, withdrawal of the rejections of record and allowance of this application are earnestly solicited.

Should the Examiner believe that a telephone conference with the undersigned would assist in resolving any issues pertaining to the allowability of the above-identified application, please contact the undersigned at the telephone number listed below. Please grant any required extensions of time and charge any fees due in connection with this request to deposit account no. 08-2025.

Respectfully submitted,

Dated: February 16, 2007

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